

The Systems Security Engineering Capability Maturity Model

Karen Ferraiolo, Arca Systems, An Exodus Communications Company

TUTORIAL SUMMARY:

The Systems Security Engineering Capability Maturity Model (SSE-CMM) was developed with the objective of advancing security engineering as a defined, mature and measurable discipline. The model and its accompanying appraisal method are currently available tools for evaluating the capability of providers of security engineering products, systems, and services as well as for guiding organizations in defining and improving their security engineering practices.

This tutorial describes the SSE-CMM and its appraisal method. In addition, a discussion of the application of the SSE-CMM looks at issues as they present themselves throughout a system acquisition, from RFP, through development, and to system operation. The outline of the tutorial is as follows:

- Why define security engineering practices?
- How can they best be defined?
- Who developed and supports the SSE-CMM?
- What is security engineering?
- How does the SSE-CMM* define practices for security engineering?
- What is the relation between the SSE-CMM and other methods of obtaining assurance?

SPEAKER BIOGRAPHY:

Karen Ferraiolo has eighteen years of experience in the acquisition, specification, design, development, documentation, and verification of secure systems. She is Director of Research and Development at Arca Systems, Inc. and leads their efforts related to the SSE-CMM and process improvement. Ms. Ferraiolo led the initial research into the development of a CMM for security engineering and was elected for two years as the Leader of the Author Group for the community-based SSE-CMM Project. These efforts resulted in publication of SSE-CMM versions 1.0 and 1.1. She currently provides consulting to various projects in applying the SSE-CMM to define and improve security engineering practices. She is Director of Technical Development for the International Systems Security Engineering Association (ISSEA), the non-profit organization that now supports the advancement and adoption of the SSE-CMM. Ms. Ferraiolo has a B.S. in Mathematics and Computer Science.